Foreign Comparative Testing Program Office – Industry Product/Technology Information Sheet

Date: 10/23/2019

Product:
Unmanned Ground Vehicle (UGV)
"Remote controlled Combat Engineering Support Platform"

Company Name:
Brokk Security and Rescue Solutions

Country:
Sweden

Website:
https://www.brokk.com/us/security-and-rescue-for-industries/

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Short Description:
Brokk Security and Rescue Solutions offer a range of robust, powerful and standardized UGVs for Defense, Law enforcement and Rescue organizations. Robots with a remote operated range of well over 1.000m and with a vast (unique) number of tools and attachments giving the organizations not only optimal safety, but also flexibility and possibility to utilize the investment to a very high degree.

Technology Readiness Level *(fielded, operationally tested, developmental tested, lab-bench tested)*:
Operationally tested during 2017 and 2018, fielded early 2019.

Brokk has designed, produced and sold robots since 1970th for deconstruction, tunneling, mining, metal processing, cement and nuclear decommission. The last 10-15 years also tailored robots for defense, law enforcement, rescue, nuclear rescue customers around the world. The increasing number of requests for tailoring systems for the government segment lead us to the decision to form a new division under Brokk AB about three years ago. Brokk Security and Rescue Solutions (BSRS). Since than the old experience and new experience has been used to develop a new standardized range of products tailored for the government segment. This is the SR-System. The first SR-product (prototype) was introduced 2017 and was tested and evaluated by different military, police and rescue services around the world for almost two years. The feed-back and experience rendered the now standardized SR-System released early 2019. The SR-System today consist of three different platforms or robots. The SR-120D, SR-520D and SR-800D. The Operator Control Modules, sensors data link, electronics, etc. are all the same through the system with only different physical properties depending on platform/robot.

Supporting Data *(key tested performance metrics)*:

Description	SR-120D	SR-520D	SR-800D
Size (LxWxH) (in)	83x30,7x60	177x63x87	225x87x105
Horizontal reach (m)	3,5m	5,5m	7,5m
Lifting	150-700kg	700-3.400kg	2.700-7.200kg
Speed	3km/h	3km/h	3km/h
Mission time	8-10h	8-10h	8-10h

Sensors	5 x EO-sensors (digital) with automatic night vision
LED Lights	4 x remote and individually controlled LED-lights
Sensor coding	H.265 for optimal compression with highest image quality
Audio	Two-way audio communication
Wireless digital data	> 1.000m LoS with 2,3Mbps and 20 dB link margin
Max data rate	15Mbps for up to 1km LoS with 20 dB link margin (standard 2W PO)
Protocol	IP Based
Network	Ad-hoc
Encryption	15 bit encryption, OPTIONAL AES-256 embedded in hadware
Frequency	standard 4,9 to 5,9 GHz
Power out	standard 2W (33 sBm)
Antenna Gain	standard Omni antenna 7 dBi
Transmitting power	standard 40 dBm EIRP
Optical fibre	OPTIONAL max 1.000m (100m on automatic real on robot, additional on manual reals)

Application *(the so what?)*:

Science *(how it works)***:**
See specifications above

Portfolio Area *(Air, Communications, Ground, Lethality, Medical, Soldier, Process, Other)***:**
Combat Engineering, EOD/UXO/IEDD, CBRN, MedEvac

Countries using this product:
Older systems e.g.: Japan (Fukushima), Russia, Spain, UK, France, US, (Lebanon NGO), (Cambodia, NGO),
Israel
2019 New standardized SR-System: Germany (EOD/UXO)

U.S. Partners:
Brokk Inc.

Previous work with DoD:
Eglin Airforce base